AMENDMENTS TO THE CLAIMS:

1-7. (Canceled)

8. (Currently Amended) A holographic recording apparatus for recording a piece of data on a holographic medium in a form of a flat plate which includes a recording layer comprising a photosensitive material and for which recording is achieved by an interference pattern of a coherent light beam, the apparatus comprising:

a pickup including an objective lens which focuses the coherent light beam, for moving the objective lens along a recording track of the holographic recording medium and detecting reflected light from the recording track to perform focus- and tracking-servo ~~control;~~control, and for detecting a marker provided in the holographic recording medium to generate a marker detection signal;

~~a relative velocity determination unit for determining a relative velocity of a converging position of the objective lens with respect to the holographic recording medium;~~

a driving unit for ~~changing~~driving ~~a relative position of~~ the objective lens or a mirror arranged in an optical path of the coherent light beam to the objective lens~~with respect to an optical path of the coherent light beam;~~ such that the converging position of the objective lens tracks the marker using the marker detection signal, and

a control unit for performing recording ~~for~~on the recording ~~layer during a predetermined period,~~layer.

~~wherein the driving unit moves an incident optical path of the coherent light beam to~~

~~the objective lens based on the relative velocity determined by the relative velocity determination unit such that a moving distance of the converging position relative to the holographic recording medium falls within half a period of a pitch of interference fringes at least during a time period for recording the piece of data, the interference fringes being generated by the coherent light beam.~~

9. (Currently Amended) The holographic recording apparatus according to claim 8, further comprising a relative velocity determination unit for determining a relative velocity of a converging position of the objective lens with respect to the holographic recording medium,

wherein the driving unit ~~rotates a mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens.~~drives the objective lens so that the relative velocity falls within a predetermined range at least during the predetermined period.

10. (Currently Amended) The holographic recording apparatus according to claim ~~8,~~9, wherein the driving unit ~~rotates a polygon mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens.~~drives the objective lens such that a moving distance of the converging position relative to the holographic recording medium falls within half a period of a pitch of interference fringes at least during a time period for recording the piece of data, the interference fringes being generated by the coherent light beam.

11-17. (Canceled)

18. (Currently Amended) A holographic reproducing apparatus for reproducing a piece of data recorded on a holographic recording medium in a form of a flat plate which includes a recording layer comprising a photosensitive material and for which recording is achieved by an interference pattern of a coherent light ~~pattern,~~beam, the apparatus comprising:

a pickup including an objective lens which focuses the coherent light beam, for moving the objective lens along a recording track of the holographic recording medium and detecting reflected light from the recording track so as to perform focus- and tracking-servo ~~control;~~ control, and for detecting a marker provided in the holographic recording medium to generate a marker detection signal;

~~a relative velocity determination unit for determining a relative velocity of a converging position of the objective lens with respect to the holographic recording medium;~~

a driving unit for ~~changing~~driving ~~a relative position of~~ the objective lens or a mirror arranged in an optical path of the coherent light beam to the objective lens~~with respect to an optical path of the coherent light beam;~~ such that the converging position of the objective lens tracks the marker using the marker detection signal, and

a control unit for performing reproduction from the recording ~~layer during a predetermined period,~~layer.

~~wherein the driving unit moves an incident optical path of the coherent light beam to the objective lens based on the relative velocity determined by the relative velocity determination unit such that a moving distance of the converging position relative to the~~

~~holographic recording medium falls within a half a period of a pitch of interference fringes at least during a time period for reproducing the piece of data, the interference fringes being generated by the coherent light beam.~~

19. (Currently Amended) The holographic reproducing apparatus according to claim 18, further comprising a relative velocity determination unit for determining a relative velocity of a converging position of the objective lens with respect to the holographic recording medium, wherein the driving unit ~~rotates a mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens.~~ drives the objective lens so that the relative velocity falls within a predetermined range at least during the predetermined period.

20. (Currently Amended) The holographic reproducing apparatus according to claim ~~18,~~19, wherein the driving unit ~~rotates a polygon mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens.~~drives the objective lens such that a moving distance of the converging position relative to the holographic recording medium falls within half a period of a pitch of interference fringes at least during a time period for recording the piece of data, the interference fringes being generated by the coherent light beam.

21-27. (Canceled)

28. (Currently Amended) A holographic recording method for recording data on a holographic recording medium in a form of a flat plate which includes a recording layer comprising a photosensitive material and for which recording is achieved by an interference pattern of a coherent light beam, the method comprising:

a step of focusing the coherent light beam by an objective lens;

a step of moving the objective lens along a recording track of the holographic recording medium and detecting reflected light from the recording track to perform focus- and tracking-servo ~~control;~~control, and to detect a marker provided in the holographic recording medium to generate a marker detection signal;

~~a relative velocity determination step of determining a relative velocity of a converging position of the objective lens with respect to the holographic recording medium;~~

a driving step of ~~changing~~ driving ~~a relative position of~~ the objective lens or a mirror arranged in an optical path of the coherent light beam to the objective lens ~~with respect to an optical path of the coherent light beam;~~such that the converging position of the objective lens tracks the marker using the marker detection signal, and

a step of performing recording ~~for~~on the recording ~~layer,~~layer.

~~wherein the driving step moves an incident optical path of the coherent light beam to the objective lens based on the relative velocity determined by the relative velocity determination step such that a moving distance of the converging position relative to the holographic recording medium falls within a half a period of a pitch of interference fringes, at~~

~~least during a time period for recording the piece of data the interference fringes being generated by the coherent light beam.~~

29. (Currently Amended) The holographic recording method according to claim 28, further comprising a relative velocity determination step of determining a relative velocity of a converging position of the objective lens with respect to the holographic recording medium,

wherein the driving step ~~rotates a mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens.~~ drives the objective lens so that the relative velocity falls within a predetermined range at least during the predetermined period.

30. (Currently Amended) The holographic recording method according to claim ~~28,~~29, wherein the driving step ~~rotates a polygon mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens.~~ drives the objective lens such that a moving distance of the converging position relative to the holographic recording medium falls within half a period of a pitch of interference fringes at least during a time period for recording the piece of data, the interference fringes being generated by the coherent light beam.

31-37. (Canceled)

38. (Currently Amended) A holographic reproducing method for reproducing data recorded on a holographic recording medium in a form of a flat plate which includes a recording layer comprising a photosensitive material and for which recording is achieved by an interference pattern of a coherent light pattern, the method comprising:

a step of focusing the coherent light beam by an objective lens;

a step of moving the objective lens along a recording track of the holographic recording medium and detecting reflected light from the recording track so as to perform focus- and tracking-servo ~~control;~~control, and to detect a marker provided in the holographic recording medium to generate a marker detection signal;

~~a relative velocity determination step of determining a relative velocity of a converging position of the objective lens with respect to the holographic recording medium;~~

a driving step of ~~changing~~driving ~~a relative position of~~ the objective lens or a mirror arranged in an optical path of the coherent light beam to the objective lens ~~with respect to an optical path of the coherent light beam;~~such that the converging position of the objective lens tracks the marker using the marker detection signal, and

a step of performing reproduction from the recording ~~layer,~~layer.

~~wherein the driving step moves an incident optical path of the coherent light beam to the objective lens based on the relative velocity determined by the relative velocity determination step such that a moving distance of the converging position relative to the holographic recording medium falls within a half a period of a pitch of interference fringes at least during a time period for reproducing the piece of data, the interference fringes being~~

~~generated by the coherent light beam.~~

39. (Currently Amended) The holographic reproducing method according to claim 38, further comprising a relative velocity determination step of determining a relative velocity of a converging position of the objective lens with respect to the holographic recording medium,

wherein the driving step ~~rotates a mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens.~~ drives the objective lens so that the relative velocity falls within a predetermined range at least during the predetermined period.

40. (Currently Amended) The holographic reproducing method according to claim ~~38,~~39, wherein the driving step ~~rotates a polygon mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens.~~drives the objective lens such that a moving distance of the converging position relative to the holographic recording medium falls within half a period of a pitch of interference fringes at least during a time period for recording the piece of data, the interference fringes being generated by the coherent light beam.

41-53. (Canceled)